

Measuring and Presenting Inflation

FESAC meeting discussant slides

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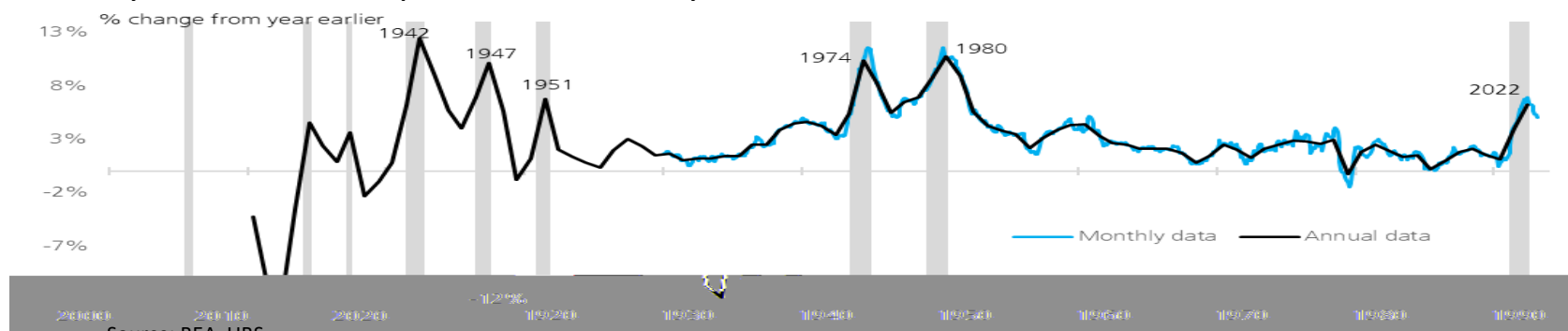
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First, a word of praise

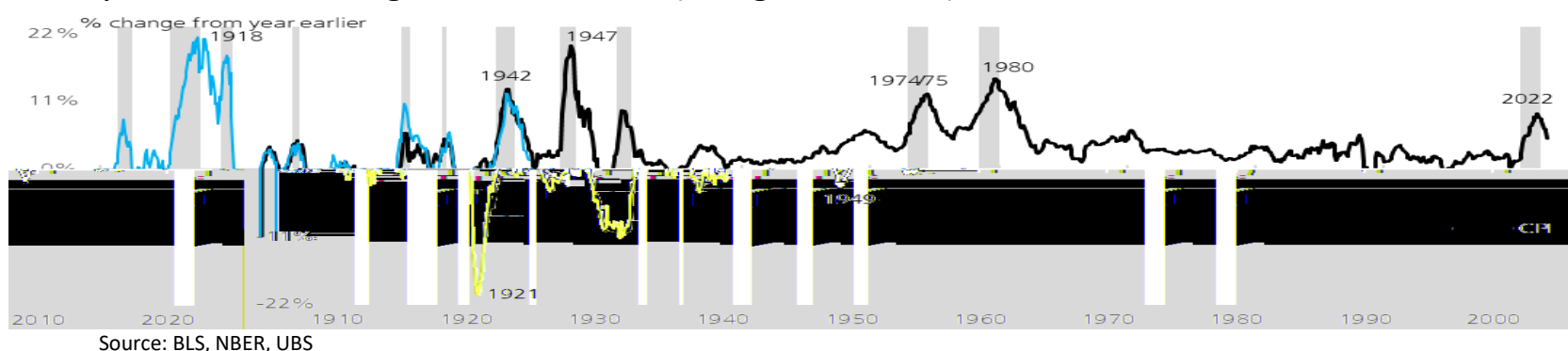
The variety, depth, and transparency of statistics should be commended.

What many consider routine in the US is often lacking for other countries. For inflation:

- Seasonally-adjusted monthly inflation with a full breakdown of components.
- Relatively consistent PCE price data monthly from 1959, annual from 1929



- Monthly CPI/Cost of living data from 1921 (using 1967 base).



...as well as producer price, import prices, construction prices, wages, unit labor costs, unemployment, output growth, etc.

Availability of these data are one reason that macroeconomic studies often focus on the US.

Two key areas for improvement in the current environment:

1. Current macroeconomic data seems to have significant seasonal adjustment issues.
2. Data that is not timely is obscuring our view of current inflation

I'll come back to these later

“High Inflation in BEA’s Statistics” by Bob Kornfeld lays out some great questions

Inflation in BEA’s statistics



- Some questions to consider

- Are we measuring recent price changes accurately?
- Are our measures internationally comparable?
- Should we update our methods or documentation?
- Should we release additional data?
- How could our presentation of price changes be expanded to strengthen and better serve analyses of inflation?

I will provide my take on these questions out of order and apply them to all three agencies in the presentations (BEA, Census, BLS)



Adjustments for Economic Indicators

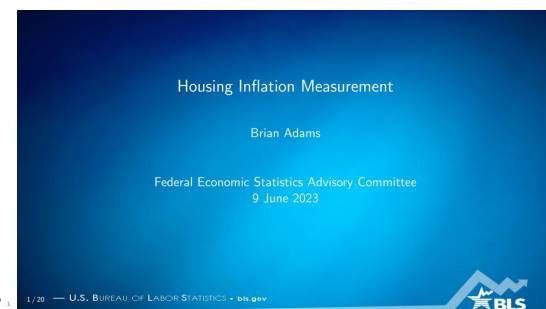
Paul Buccchioni
Economic Indicators Division

June 9, 2023

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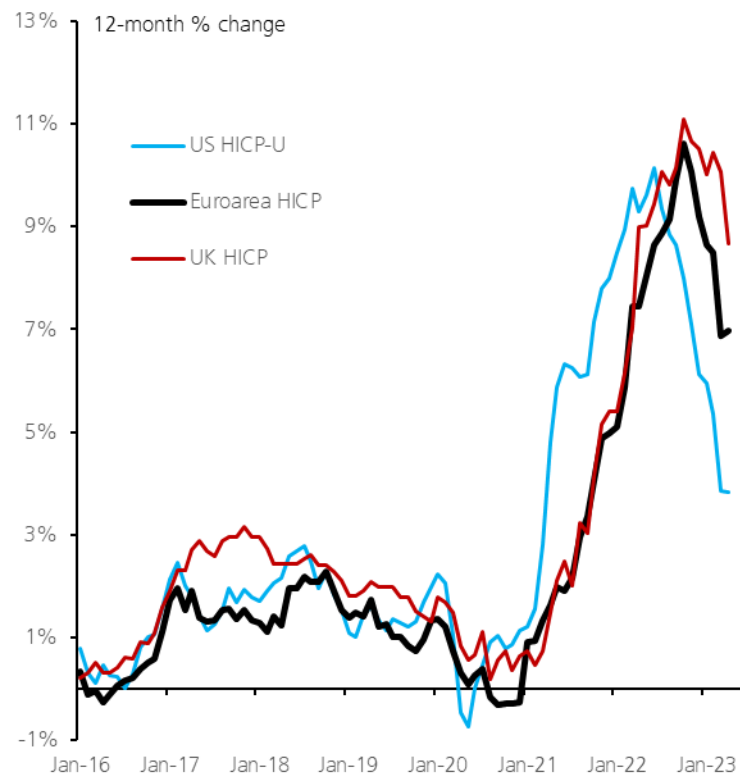


Are our measures internationally comparable?

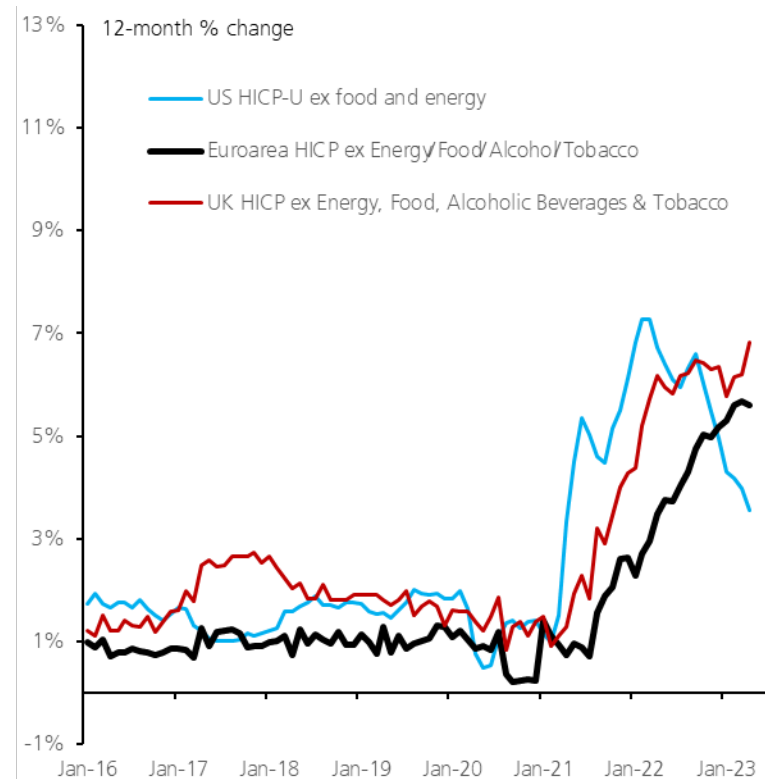
Simple answer: **Close enough for private sector work**

Slightly longer answer: **BEA publishes some national accounts data based on the system of national accounts (SNAs).**

BLS resumption of HICP was useful.



Source: BLS, Eurostat, ONS



Source: BLS, Eurostat, ONS

How could our presentation of price changes be expanded to better serve analyses of inflation?

The first presentation mentions a number of possible additions:

1. PCE prices ex. food, energy, housing, used cars, financial services, portfolio management...)
2. “Supercore” inflation
3. Trimmed mean inflation
4. Sticky-price inflation
5. Various contribution tables

I worry that this path leads to **an ever-proliferating set of tables and indicators** that become quickly becomes cumbersome and little used. While there are certain instances where additional indicators should be provided (say, the Federal Reserve or other government entity requesting an indicator based off a valid policy reason), it is probably not in the BEA, BLS, or Census’s best interest to spend their limited resources on notably expanding various cuts of data that users could re-jigger themselves

- An alternative approach might be to create a 1-to-2-page document clearly laying out the recommended methodologies for creating contributions, and doing strip-outs/aggregation, from published data and let users create the indexes they prefer.

Should we release additional data?

In general, yes, more data availability is better --- particularly if it is data the statistical agency already has (so low cost), can not easily be created from already published data, and is not readily available somewhere else (so possibly high value).

But, again, it needs to be balanced against resource constraints and not reduce the quality of the primary indexes or other needed improvements.

Should we update our methods and documentation?

Documentation has improved over the past 20 years across the board and this improvement should be commended.

However, some lack of transparency still exists. Notably in PCE prices the sources and methods on financial services and nonprofits remains opaque. Many categories are still listed as “BEA composite of input prices”

Table 5.B—Summary of Methodology Used to Prepare Estimates of PCE for Services

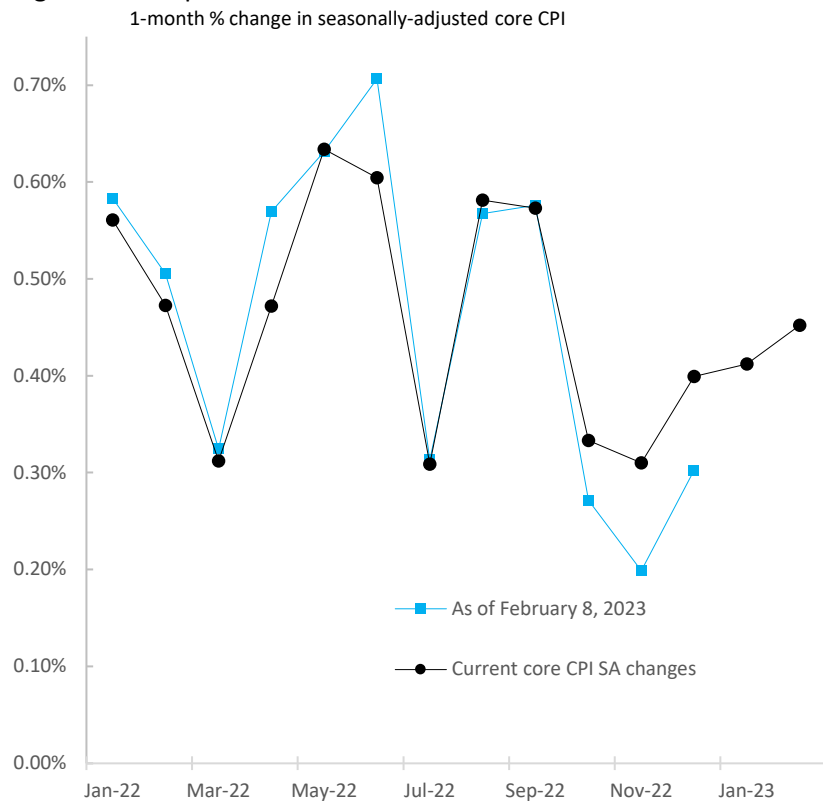
Line in NIPA table group 2.4	Component	Current-dollar estimates			Quantity and price estimates (Quantity estimate prepared by deflating with price index unless otherwise indicated)
		Benchmark year	Indicator series used to interpolate and extrapolate*		
			Nonbenchmark years	Current quarterly estimates	
106	Social services and religious activities	<u>Religious organizations:</u> commodity-flow method, starting with receipts based on Independent Sector study of church finances.	<u>Religious organizations:</u> data on change in charitable giving to religious organizations from Giving USA Annual Report., <u>Other private social service</u>	<u>Community food and housing/emergency/other relief services:</u> for second and third estimates, QSS receipts data; for advance estimate, based	Child care: CPI for child care and nursery school. Other components: BEA composite index of input costs.

...but gradual shifting over to PPI prices for some of these categories in recent years has been an improvement in clarity.

Should we update our methods and documentation?

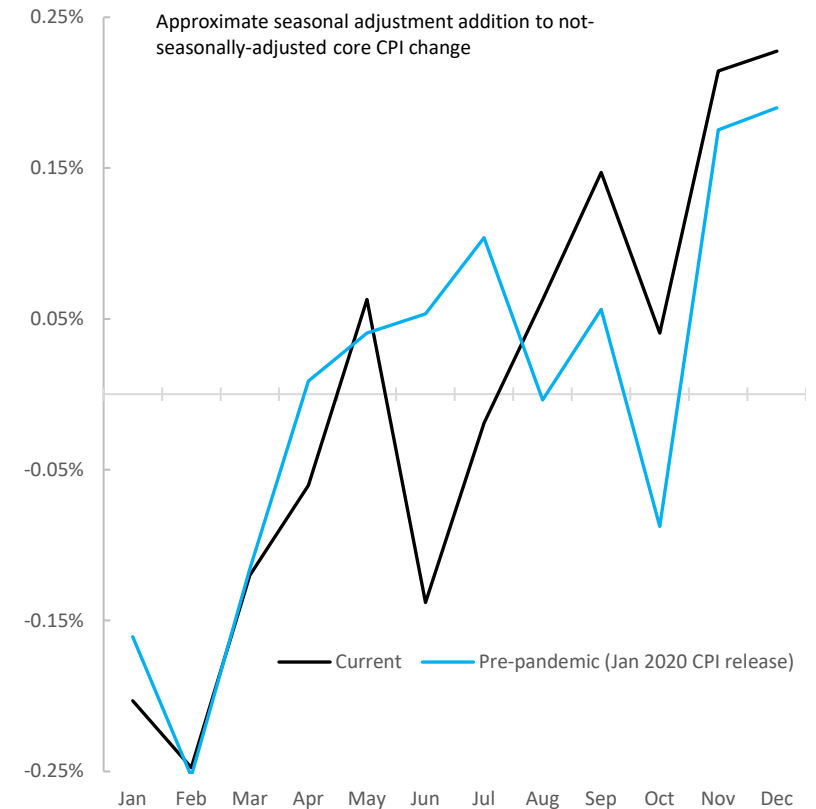
Methodology: Seasonal adjustment factors have swung around a lot during the pandemic. This amount of swinging is probably inappropriate. (See various papers by Jonathan Wright) Additionally, the BEA bringing in only part of the seasonal adjustment of the CPI in early February into PCE prices is a concern given the FOMC's reliance on the measure.

Revised seasonal adjustment factors in February notably changed the trend in inflation. Only the upward revised months of October to December have been brought into PCE prices



Source: BLS, UBS

Seasonal adjustment factors look to be set to take off around 16bp more from the core CPI increase in June compared to pre-pandemic



Source: UBS based on BLS CPI data

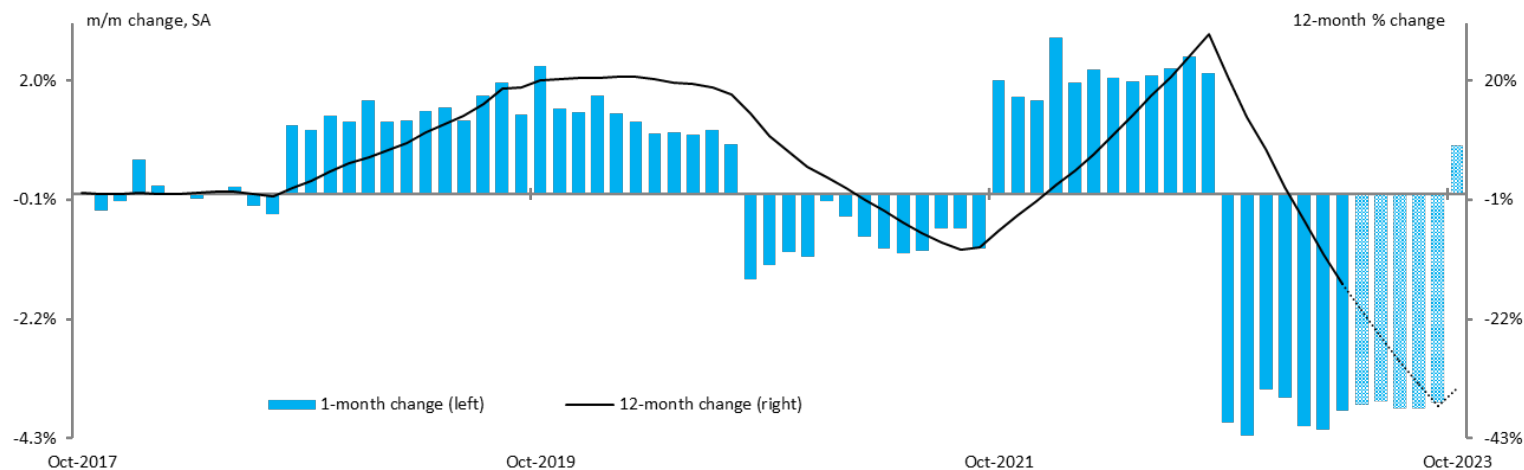
Should we update our methods and documentation? and Are we measuring recent price changes accurately?

There are some inconsistencies in the CPI, and hence PCE prices that rely on them. *These methodology inconsistencies can lead to inaccuracies in measuring current market inflation.*

The CPI prices current market price for most items. But two relatively well known and important exceptions are **medical insurance** and **rents**.

CPI medical care insurance

1. *Monthly changes for CPI medical care insurance are currently (mid-2023) largely based on comparing insurance company retained earnings during calendar year 2021 to calendar year 2020.* The 2022/2021 comparison is likely to be brought in starting October. This is far, far too delayed.
2. In September the 12-month change in CPI medical insurance will be close to -37% after rising 28% in the prior 12-month period:



Source: BLS, UBS estimates

This is a *swing in the contribution to overall CPI inflation of roughly 64bp* for a category that is about 1% of CPI expenditures (relative importance weight) --- a notable impact for a category that is not measuring current inflation.

CPI/PCE rents --- the second very lagged component

- The release of the Adams, Loewenstein, Montag, Verbrugge paper was important because it gave public-sector validity to what some in academia and the private sector (including at least one prominent member of FESAC) had been pointing to.

Disentangling Rent Index Differences: Data, Methods, and Scope*

Brian Adams¹, Lara Loewenstein², Hugh Montag¹, and Randal Verbrugge²

¹US Bureau of Labor Statistics

²Federal Reserve Bank of Cleveland

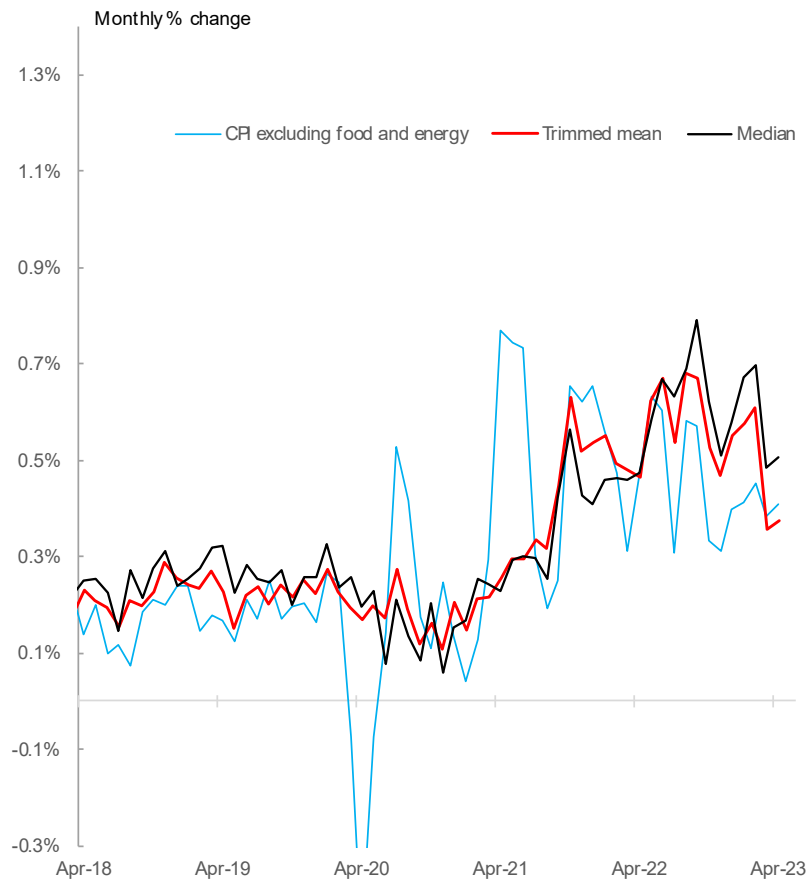
October 6, 2022

- This paper likely had some influence in changing the tone of monetary policy and a factor leading to a more nuanced look at core inflation using the 3-component breakdown (core goods, rents, core services ex rents) that has become popular at the Federal Reserve and, subsequently, among the financial community.

CPI/PCE rents

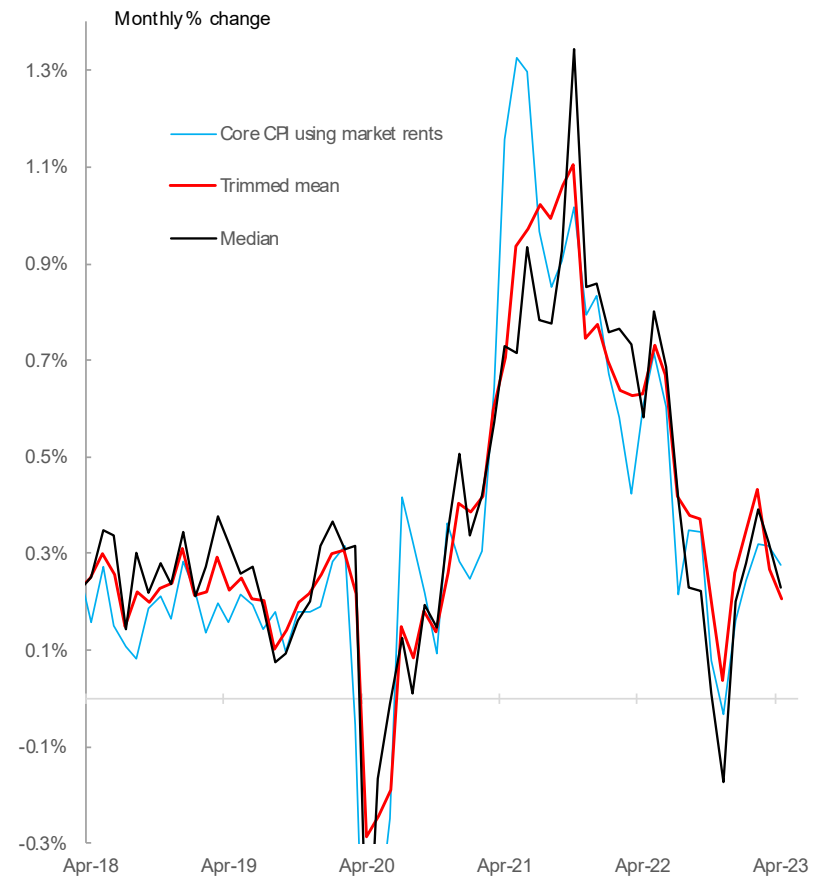
- Using market rents rather than current CPI/PCE rents is likely more appropriate for monetary policy. It also suggests monthly inflation rose much sooner and has fallen much quicker:

All normal CPI items



Source: BLS, UBS construction using 77 components and trimming top 20% and bottom 20%.

Replacing CPI OER and tenants' rent with market rents



Source: BLS, Apartment List, Zillow, UBS

Additional thoughts on the NTRR index

1. The correlation with the NTRR and CoreLogic data suggests that alternative data sources (MLS and other private sector sources) might be a way forward in the future if the BLS wishes to construct these indexes monthly a fairly low cost.
2. A repeat rent index is unlikely to work for the CPI, which does not have revisions to NSA data, but might be more feasible for a PCE-based price index, which does have revisions, but speed and frequency would need to be increased.
3. I do believe that a monthly index would be preferable to a quarterly one
4. Given the importance of this index in the present inflation debate I would suggest releasing the index every month starting as soon as possible and revise methods as needs dictate.

In conclusion

1. Current macroeconomic data likely to have significant seasonal adjustment issues and are making it harder to discern changes in inflation in real time.
2. CPI/PCE Rents and CPI medical insurance are not timely indicators and are obscuring our view of current inflation

These are key areas where improvement efforts likely should be focused.

Thank you

Valuation Method and Risk Statement

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